IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	:	Trevino et al.
Serial No.	:	09/683,130
Filed	:	November 21, 2001
For	:	Method and Apparatus for Prescribing an Imaging Scan and Determining User Input Validity
Group Art No.	:	2621
Examiner	:	Christopher L. Lavin

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY BRIEF RESPONSIVE TO EXAMINER'S ANSWER
MAILED MARCH 22, 2006

Dear Sir:

This Reply Brief is being filed in response to the Examiner's Answer mailed March 22, 2006.

REMARKS

1.   **Response to Examiner's Grounds of Rejection Section**

The Examiner's recitation of the grounds of rejection includes a reiteration of the grounds of rejection as articulated in the Final Office Action mailed June 7, 2005. However, the grounds of rejection in the Examiner's Answer includes additional language not included in the Final Office Action. With regard to the Examiner's grounds of rejection regarding Gaertner in the Examiner's Answer, the Examiner added the statement that "[b]y preventing operations to continue until the parameter is within range Gaertner is teaching of alerting the user of the problem." *Examiner's Answer, Mar. 22, 2006, pp. 7-8, 10, and 13.* Appellant respectfully disagrees with the Examiner and addresses the Examiner's additional language below.

2.   **Response to Examiner's Response to Argument Section**
                       CLAIM REJECTIONS – 35 U.S.C. §102

   Claim 9:

      The Examiner stated that:

      Wu teaches (col. 14, lines 20 - 27) that a user selects a sequence of scan
      parameters. This sequence is part of a larger group of parameters referred to as
      "selectable parameters" by Wu. These selectable parameters comprise the entire
      set of parameters that control an MRI machine. The remaining "selectable
      parameters" that are not chosen by the user still need to be set in order for the
      MRI machine to function. As Wu states all of the parameters are retrieved. So the
      user is setting a priority on the parameters, parameters that the user has chosen to
      directly modify and parameters that user will not directly modify. This ranking
      (the user is giving parameters a measure of importance if he or she decides to
      directly modify them) or setting a priority between parameters establishes a
      hierarchy between the parameters.

Examiner's Answer, supra at 14. Appellant respectfully disagrees.

Wu does not teach that the user selected sequence is part of a larger group of parameters referred to as "selectable parameters". Wu teaches sequence parameter retrieval from a database memory upon user selection of a sequence. *See col. 14, lines 20-22.* Wu teaches that the entire set of values for the selectable parameters that govern the operation of the MRI apparatus are preferably retrieved, "as opposed to retrieving only values for those parameters included in the sub-set of selectable parameters that are displayed in the first display area 100." *Col. 14, lines 22-27.* As such, user selection of the sequence does not select and/or retrieve a sub-set of selectable parameters. Instead, the entire set of values for the selectable parameters is retrieved.

Since Wu teaches that the entire set of values for the selectable parameters is retrieved, Wu does not suggest that the user sets a priority on the parameters through selection of the sequence. That is, the user has not chosen to modify some parameters and to not modify other parameters through the sequence selection.

The Examiner further stated that "[b]y breaking the selectable parameters into two groups, one given more importance by the user, the parameters have been hierarchically prioritized." However, as stated above, the entire set of values for the selectable parameters are retrieved. As such, the user has not given more importance to one group of parameters over another group of parameters. Therefore, Wu fails to teach or suggest that the user breaks the selectable parameters into two groups upon sequence selection.

Claim 12:

The Examiner stated that:

> it should be noted that Wu still has the ability to affect a change on one tertiary parameter based on the change to another tertiary parameter. Wu simply is saying that it is preferable that the user not be able to directly change a tertiary parameter, Wu is not saying that it [sic] the method is incapable of doing so. Wu teaches (col. 10, lines 48 - 59) that there are "tradeoffs" between monitor parameters (in this case SNR and scan time). In other words the change to one monitor parameter will affect another monitor parameter. So Wu discloses that the change to one tertiary scan parameter (monitor parameter) can affect another tertiary scan parameter. What Wu is stating (col. 10, lines 40 - 47, col. 10, line 60 - 67) is that because these tertiary parameters aren't easily understood it is better not to let the user directly edit them.

Examiner's Answer, supra at 15. Appellant respectfully disagrees.

The Examiner equated the monitor parameters of Wu as tertiary parameters as called for in claim 12. *See Final Office Action, supra at 3.* Appellant disagrees that Wu discloses the ability to affect a change on one monitor parameter based on a change to another monitor parameter. Wu teaches that the monitor parameters "are calculated by the user interface processor 60 from the selectable parameters." *Col. 10, lines 41-43.* Wu further teaches that the monitor parameters are "changed <u>indirectly</u> in response to new values of the underlying selectable parameters . . . ." *Col. 10, lines. 43-47 (emphasis added).* Thus, Wu teaches calculation of the monitor parameter changes from new selectable parameter values – not from changes to another monitor parameter. It is not a change to one monitor parameter that affects a change in another monitor parameter. Instead, the underlying selectable parameters affect changes to monitor parameters. While a change to a selectable parameter may affect changes to multiple monitor parameters, a change to one of the multiple monitor parameters is not caused based on a change to another of the multiple

monitor parameters. The multiple monitor parameter changes are affected by the selectable parameter value changes.

As reiterated above, the Examiner stated that "[w]hat Wu is stating (col. 10, lines 40 - 47, col. 10, line 60 - 67) is that because these tertiary parameters aren't easily understood it is better not to let the user directly edit them." *Id.* However, there is no teaching or suggestion in Wu that a user should not be allowed to directly edit monitor parameters because a user might not easily understand the monitor parameters. Further, as stated above, Wu teaches that the monitor parameters are changed indirectly in response to new values of the underlying selectable parameters. There is no teaching or suggestion in Wu that monitor parameters may be directly modified or that modification to one monitor parameter may affect another monitor parameter.

CLAIM REJECTIONS – 35 U.S.C. §103

Claim 1:

The Examiner stated that "[i]n Wu, when a user changes a parameter that change causes a series of other parameters to be updated." *Examiner's Answer, supra at 16.* The Examiner stated that "[t]he user is then presented with the update, included with the update is an "undo" button, which allows the user to revert to the previous state of the parameters if something is wrong." *Id.* The Examiner also stated that "[a]s shown in the rejection of claim 1, Wu discloses everything that is claimed except for the concept of alerting a user of a problem with the first parameter before updating the remaining parameters." *Id.*

Wu teaches that "selectable parameters are preferably displayed in a graphical manner which interrelates each parameter value with its minimum and maximum allowable limits." *Col. 9, lines 29-32.* Wu teaches using a slider to display the current value and the minimum and maximum limits to a user. *See col. 9, lines 32-38.* The user uses a mouse or other pointing device to move the slider to change parameter values. *See col. 9, lines 48-58.* Wu also teaches that the user interface preferably "constrains the user from dragging a parameter value beyond a minimum or maximum limit value." *Col. 9, lines 58-60.* Thus, Wu discloses that when the user moves the slider to a new value in order to change a parameter to that value, the value is within its minimum and maximum allowable limits.

As stated above, the Examiner stated that Gaertner teaches alerting a user of a problem by preventing operations to continue until the parameter is within range. The Examiner repeated variations of this statement throughout the Examiner's Response to Argument section:

- Gaertner "teaches that a state machine is used to prevent further action until a first parameter is determined to be within a desirable range, and only then will the state

machine go forward to determine what changes this parameter causes on other parameters." *See p. 16.*

- "Gaertner is clearly teaching that the user can not continue until the parameter is within range, and therefore the user must be alerted to the out of range condition in some fashion." *See p. 17.*

- "As discussed above Gaertner teaches that the state machines [sic] prevents the user from moving on until the parameter is set correctly, this acts as a means of alerting the user of the problem." *See p. 18.*

- "Gaertner provides the concept of preventing a user from continuing until a parameter is placed within a correct range." *Id.*

- "To recap, Gaertner was brought in to teach preventing a method from continuing until a parameter is within a proper range; the step of prevention provides a means of alerting the user of a problem. Gaertner then teaches that only after the parameter falls within the desired range does the state machine go on to check the other parameters for updates." *See p. 19.*

Appellant disagrees that Gaertner discloses preventing a method from continuing until a parameter is within a proper range. Gaertner teaches that parameter ranges "may be used as part of a monitoring program which would then take actions based on satisfying these ranges, e.g., alerting users that these parameters ranges were satisfied." *Col. 7, lines 5-8.* Gaertner discloses a state machine "used to determine whether conditions are met." *Col. 7, lines 8-9.* Gaertner teaches that "[o]nce the state machine determines that the range is satisfied, the monitoring program handles the determination of the actual alarms based on the relationships which the range may have with other ranges." *Col. 7, lines, 25-28.* If the range has an "and" relationship with a second set of parameters, the monitoring programs looks "to a second state machine to determine whether the range conditions of [the] second set of parameters were satisfied before alerting users or taking other actions." *Col. 7, lines 29-32.*

Gaertner fails to teach or even suggest preventing a method from continuing until a parameter is within a proper range. While parameter conditions are not met, the state machine of Gaertner continues to monitor the conditions. When the conditions have been satisfied, the monitoring program may alert a user that the conditions were satisfied. Thus, while Gaertner may disclose alerting the user once the conditions have been satisfied, the state machine nevertheless continues to execute the method of monitoring the values for parameter satisfaction. As such, no method is prevented until a parameter is within a proper range.

However, even if, assuming *arguendo*, that Gaertner discloses that a method is prevented from continuing until a parameter is within a proper range, as explained above, Wu discloses that when the user moves the slider to a new value in order to change a parameter to that value, the value is within its minimum and maximum allowable limits. Since the new parameter value is within the minimum and maximum allowable limits, the method of Wu is not prevented from continuing. Also, as stated above, the Examiner stated that "Gaertner is clearly teaching that the user can not continue until the parameter is within range, and therefore the user must be alerted to the out of range condition in some fashion." *Examiner's Answer, supra at 17.* However, since the new parameter value is within the minimum and maximum allowable limits, a user is not alerted of an <u>out of range</u> condition or problem with the new parameter value before updating the number of remaining scan parameters.

As stated above, the Examiner stated that "Wu discloses everything that is claimed except for the concept of alerting a user of a problem with the first parameter before updating the remaining parameters." *Examiner's Answer, supra at 16.* As the Appellant has discussed herein, a user is not alerted to a "problem" with the first parameter through manipulation of the slider associated with the value of the first parameter. Manipulation of the slider merely results in a new parameter value selection within allowable limits. As such, no "problem" has been determined with the first parameter through mere manipulation of the slider.

While Appellant agrees with the Examiner that Wu fails to disclose alerting a user of a problem with the first parameter before updating the remaining parameters, the combination of Wu with Gaertner fails to teach or suggest that called for in claim 1. The Examiner has stated that "Gaertner was brought in to teach preventing a method from continuing until a parameter is within a proper range; the step of prevention provides a means of alerting the user of a problem." *Id. at 19.* Since the parameter is within a proper range through slider manipulation, no method is prevented from continuing, and a user is not alerted of a problem. Wu teaches a system that calculates and updates any changed parameter limits and monitor parameter values affected by a changed selectable parameter. *See col. 15, lines. 23-29.* After the user recognizes the effect of the change, if "the change produces undesired effects, the user advantageously operates an 'undo' option selectable for example by an 'Undo Last Change' button 144 (FIG. 2A) in the first display area." *Col. 15, lines. 39-44.* Thus, Wu discloses alerting a user to a "problem" with the first parameter after the other parameters are updated.

As such, Appellant respectfully believes that the art of record relied upon by the Examiner fails to teach, disclose, or suggest that called for in claim 1. Therefore, Appellant

believes that claim 1 and the claims that depend therefrom are patentably distinct over the art of record.

Claim 19:

The Examiner stated that "[t]he arguments for claim 19 are the same as claim 1 and therefore the examiner's responses will not be repeated." *Id. at 19.* Appellant disagrees and will therefore address claim 19 with respect to the Examiner's claim 1 arguments.

Claim 19 calls for, in part, a computer readable medium having stored thereon a computer program representing a set of instructions that when executed by a computer causes the computer to receive a command to modify <u>a scan parameter</u>, modify the scan parameter, determine <u>at least one effect</u> of modifying the scan parameter on <u>another scan parameter</u>, and display an indication of <u>the at least one effect</u> on the GUI prior to modification of the another scan parameter. The Examiner stated that Gaertner "teaches that a state machine is used to prevent further action until a first parameter is determined to be within a desirable range, and only then will the state machine go forward to determine what changes this parameter causes on other parameters." *Id. at 16.*

Gaertner fails to teach preventing a method from continuing until a parameter is within a proper range. However, even if, assuming *arguendo*, that Gaertner does teach what the Examiner asserts, claim 19 includes that the effect of modifying a scan parameter <u>on another scan parameter</u> is determined and displayed to a user. Therefore, the state machine of Gaertner will have "go[ne] forward to determine what changes this parameter causes on other parameters." *Id.* That is, in order to determine and display an effect of modifying a scan parameter <u>on another scan parameter</u>, the scan parameter must be determined to be within a desirable range, and further action is not prevented. However, Gaertner still fails to teach or suggest that an indication of the determined changes is displayed prior to modification of the other parameters.

The Examiner stated that "Wu however does not disclose alerting the user that the state of validity is out of range for any of the parameters before updating the remaining scan parameters." *Id. at 10.* Further, as fully explained above, Gaertner fails to teach or suggest displaying an indication of at least one effect of modifying a scan parameter on another scan parameter on a GUI prior to modification of the another scan parameter.

As such, Appellant respectfully believes that the art of record relied upon by the Examiner fails to teach, disclose, or suggest that called for in claim 19. Therefore, Appellant believes that claim 19 and the claims that depend therefrom are patentably distinct over the art of record.

Claim 25:

The Examiner stated that "[a]lthough the rejection of claim 25 includes a third reference, Seybold, the applicant does not appear to be arguing the combination of Seybold and Wu, but rather the combination of Wu and Gaertner. These arguments are the same as claim 1 and therefore the examiner's responses will not be repeated." *Id. at 19.* Appellant disagrees and will therefore address claim 25 with respect to the Examiner's arguments as set forth in the arguments for claim 1.

The Examiner stated that "Wu also does not disclose alerting the user that the state of validity is out of range for any of the parameters before updating the remaining scan parameters." *Id. at 12.* Claim 25 calls for, in part, a computer programmed to display on a console if there is any consequence of modifying the at least one of a plurality of options on another option before modifying the another option. As fully explained with respect to claim 19, the Examiner stated that Gaertner teaches that a state machine is used to prevent further action until a first parameter is determined to be within a desirable range. However, further action must be permitted to occur in light of the teachings of Wu with Gaertner in order to display on a console if there is any consequence of modifying at least one of a plurality of options on another option before modifying the another option. However, the teachings of Wu with Gaertner still fail to disclose or suggest that any consequence of modifying at least one of a plurality of options on another option before modifying the another option.

As such, Appellant respectfully believes that the art of record relied upon by the Examiner fails to teach, disclose, or suggest that called for in claim 25. Therefore, Appellant believes that claim 25 and the claims that depend therefrom are patentably distinct over the art of record.

For at least the reasons presented above, claims 1–31 are believed neither anticipated nor obvious over the applied art of record.

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